

SECRET

OXC-2793  
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13 December 1961

MEMORANDUM FOR : Chief, Special Projects Branch, DPD  
SUBJECT : U-2 Flight Tests with Field Strength Metering Device

1. General Flickinger tells me that he has talked to you about the possibility of installing in one of the Edwards' U-2's the metering device manufactured by Emerson Electric, which he has been concerned with in company with Dr. James Goddard, Chief Medical Officer of FAA; Dr. Rich Davies of JPL; and Dr. Fred Singer of the University of Maryland. Dr. Goddard is interested in the readings which presumably could be obtained from the device in connection with his concern for jet pilot fatigue, the subject of a current FAA study. As I understand it, this ten-pound gadget requires no direct connection to the aircraft and is designed to measure ion field strengths and space ambient radiations at various altitudes and geographic coordinates throughout the flight plan.

2. I do not know what steps you may be taking to advance this requirement, but it is useful to include this equipment on the long range refueling missions which will be coming up shortly, perhaps we should go ahead and do this, since it will presumably give the pilot something to do, but at the same time provide us with data which may be of later use in the whole problem of ion generators as a means of reducing pilot fatigue. I would, however, caution you to be certain that General Flickinger restricts his comments to Singer, Davies, Goddard, etc., regarding any applied utilization of the data which could be derived from the metering device or later modifications to a U-2 which might incorporate an ion generator for testing purposes. Although each of these scientists is prominent in his field, none has been cleared for OXCART nor the U-2 Program details as such. At some point I would be interested in learning from you what concrete plans you may be making to crank a metering device in the flight regime on the long refueling missions.

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Assistant Chief  
DPD-DB/P

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